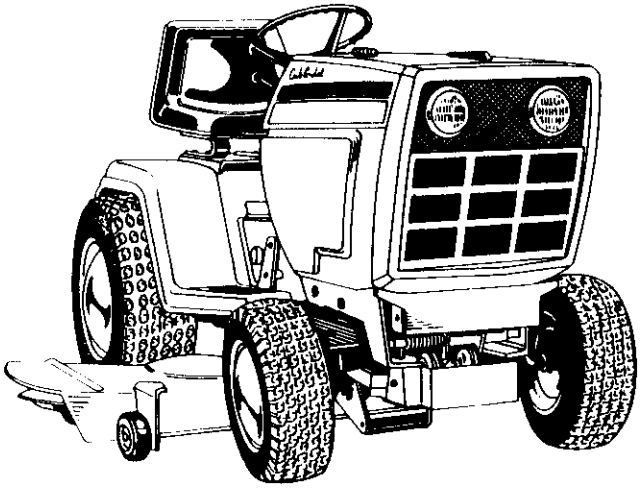
Cub Cadet®

Power Equipment

Owner's Manual

TRACTORS



Model Numbers
1210
1211

Important:
Read Safety Rules and Instructions Carefully

Thank you for purchasing an American-built product.

CUB CADET CORPORATION • P.O. BOX 36930 • CLEVELAND, OHIO 44136

PRINTED IN U.S.A.

FORM NO. 772-4005
R880829

Cub Cadet Corporation's Promise To You

We promise you, the first user purchaser, that we will replace or repair any part or parts of your new outdoor power product which is defective in material or workmanship without charge for either parts or labor during the first year following delivery to you.

We also promise you, the first user purchaser, a second year warranty on the engine and drive train of your new *Cub Cadet* Tractor, Lawn Tractor or Riding Tractor.

What the second year covers

(A) It will cover the engine internal parts contained within the engine shielding except for points, condensers, spark plugs, air filters, oil filters, and routine maintenance parts.

(B) It will cover the tractor drive train including drive shafts, drive shaft clutch, all parts enclosed by transmission housing, and axle housing, axle shafts, final drives, spindle pulleys, spindle bearings, and electric PTO clutch.

Home Maintenance Products: We promise you, the first user purchaser, a 1 year warranty on all Home Maintenance Products. This will cover Push Mowers, Self Propelled Mowers, Utility Trailers, Walk Behind Tillers, Chore Performers and Snow Throwers.

The Tecumseh engine, used on Walk Behind Snow Throwers, will carry a 2 year warranty on the engine only.

Cub Cadet Attachments:

We promise you, the first user purchaser, that we will replace or repair any part or parts which are defective in material or workmanship without charge for parts or labor during the first year following delivery to you. This will cover all *Cub Cadet* attachments. This does not include Approved Allied Equipment which is sold and warranted directly by the manufacturer.

Obtaining Warranty Service Through *Cub Cadet* Dealers

Warranty repairs will be made by your selling *Cub Cadet* dealer or any *Cub Cadet* dealer authorized to sell the type of equipment involved during the normal working hours of the dealer service department. You, the purchaser, are responsible for transportation of the equipment to the dealership for warranty service or for any service call expense, along with any overtime labor you request.

Replacement Parts Warranty

Cub Cadet parts which are furnished and installed under this warranty are themselves within the coverage of this warranty for the duration of the original warranty period or for ninety days after installation, whichever period shall expire last.

Cub Cadet
Power Equipment

What is not Covered

Tires and tubes are not covered by this warranty, but are warranted by their manufacturer. Regular maintenance replacement items such as spark plugs, ignition points, condensers, belts, cutting parts, filters and lubricants, and maintenance adjustments such as fuel system cleaning, engine tune-up, brake and/or clutch inspection or adjustment, when such replacement or adjustments are made as part of normal maintenance service are excluded from coverage. Any non-Cub Cadet product which you may have installed in or upon the product is also excluded.

No person is authorized to give any other warranty or to assume any other liabilities on the Company's behalf unless made or assumed in writing by the Company, and no person is authorized to give any warranties or to assume any liabilities on the seller's behalf unless made or assumed in writing by the seller.

Limitations On Our Responsibility

Please carefully note that this is a two-way agreement. We promise to make free repairs or replacements as stated, but you agree, that except for our obligation to make good on this promise, we shall not be responsible for any expenses or inconvenience which you might incur or experience with respect to our product, nor shall we be liable for defects, damage, or failures caused by unauthorized alterations, unreasonable use, accident or abuse, including failure to provide reasonable and necessary maintenance, after our product has been delivered to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Personal Use

The foregoing paragraphs constitute *Cub Cadet* Corporation's entire warranty with respect to any product purchased and used for personal, family, or household purposes as distinguished from commercial usage.

Commercial Use:

All *Cub Cadet* products will be warranted against defective parts or workmanship. This is for *Cub Cadet* Tractor, Attachments and Home Maintenance products and for one year only.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE EXCLUDED, AS ARE ALL OTHER REPRESENTATION TO THE USER-PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF THE COMPANY OR THE SELLER.

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Instructions given with this symbol are for personal safety. Be sure to follow them.

WARNING

This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester muffler is available at your nearest engine authorized service center.

WARNING

To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Read the owner's manual carefully in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. This unit is a precision piece of power equipment not a plaything. Therefore, exercise extreme caution at all times.
3. Know the controls and how to stop quickly - READ THE OWNER'S MANUAL.
4. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
5. No one should operate this unit while intoxicated or while taking medication which impairs the senses or reactions.
6. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts to avoid entanglement in the moving parts. Never operate a unit in bare feet, sandals, or sneakers.
7. To prevent injury, do not carry passengers or give rides. Keep children, pets and bystanders out of the area while mowing. Only the operator should ride on the unit and he/she should ride only in the seat.
8. Check overhead clearance carefully before driving under power lines, guy wires, bridges or low hanging tree branches; before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit. Such negligence could result in serious injury.
9. To maintain control of the unit and reduce the possibility of upset or collision, operate the tractor smoothly. Avoid erratic operation and excessive speed.
10. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of

foreign objects, a small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury.

11. Clear work area of objects which might be picked up and thrown in any direction by the mower and cause injury.
12. Stop the blade(s) when crossing gravel drives, walks or roads.
13. Disengage all attachment clutches and shift into neutral before attempting to start engine.
14. Disengage power to attachment(s) and stop engine before leaving operating position.
15. Do not put hands or feet near or under rotating parts. Stay clear of the discharge opening at all times as the rotating blade(s) can cause injury.
16. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire(s) and keep the wire(s) away from the plug to prevent accidental starting.
17. Before attempting to unclog the mower or discharge chute, stop the engine. The mower blade(s) may continue to rotate for a few seconds after the engine is shut off. Therefore, be sure the blade(s) have stopped completely. Disconnect the spark plug wire(s) and keep the wire(s) away from the plug to prevent accidental starting.
18. Disengage power to attachment(s) when transporting or not in use.
19. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
20. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face. Use extreme caution if it is necessary to drive the tractor up an incline or back the tractor down an incline because the front of the tractor could lift and rapidly flip over backward which could cause serious injury.
21. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Always keep the tractor in gear when going down steep hills to take advantage of engine braking action.
22. Stay alert for holes in terrain and other hidden hazards.
23. Use care when pulling loads or using heavy equipment.
    A. Use only approved drawbar hitch points.
    B. Limit loads to those you can safely control.
    C. Do not turn sharply. Use care when backing.
    D. Use counterweight(s) or wheel weights when suggested in owner's manual.
24. Watch out for traffic when crossing or near roadways.
25. When using any attachments, never direct discharge of material toward bystanders. Do not allow anyone near vehicle while in operation.
26. Handle fuel with care. It is highly flammable.
    A. Use approved fuel container.
    B. Never remove cap or add fuel to a running or hot engine or fill fuel tank indoors. Wipe up spilled fuel.
    C. Open doors if engine is run in garage. Exhaust fumes are dangerous. Do not run engine indoors.
27. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in operator's manual.
28. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
29. Never store the equipment with fuel in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
30. To reduce fire hazard, keep engine free of grass, leaves or excessive grease.
31. The vehicle and attachment should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the equipment.
32. Do not change the engine governor settings or overspeed the engine.
33. When using the vehicle with mower, proceed as follows:
    A. Mow only in daylight or in good artificial light.
    B. Never make a cutting height adjustment while engine is running if operator must dismount to do so.
    C. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
    D. Check blade mounting bolts for proper tightness at frequent intervals.
34. Check grass catcher bags frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.
35. Look behind to make sure the area is clear before placing the transmission in reverse and continue looking behind while backing up. Disengage blades before shifting into reverse and backing up.
36. This unit should not be driven up a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load properly.

TO THE OWNER

Assembled in this manual are operation, lubrication, and maintenance instructions for the *Cub Cadet* 1210 and 1211 Tractors. The material has been prepared in detail to help you better understand the correct care and efficient operation of your tractor. Before you operate the tractor, study this manual carefully. Additional copies may be ordered from your dealer at a nominal price.

Your local authorized dealer is interested in the performance you receive from your tractor. He has factory-trained servicemen, informed in the latest method of servicing tractors, modern tools, and original-equipment service parts which assure proper fit and good performance.

CAUTION

DO NOT tow your tractor. Towing or pushing the tractor for more than a few feet may damage the hydrostatic drive unit.

The *Cub Cadet* 1210 and 1211 Tractors have a hydrostatic drive unit and will require minimum service if recommended operation and maintenance procedures are followed.

To obtain top performance and assure economical operation the tractor should be inspected, depending on its use, periodically, or at least once a year, by your authorized dealer.

When in need of parts, always specify the model, chassis, and engine serial numbers, including the prefix and suffix letters. Write these serial numbers in the space provided on this page.

Should you have difficulties with the unit, consult your authorized dealer. UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO SERVICE THESE UNITS YOURSELF. Only your dealer is authorized to repair or replace units on this drive under the terms of the warranty. Should you desire additional information not found in this manual, contact your authorized *Cub Cadet* dealer.

SERIAL NUMBER LOCATION

NOTE

LEFT and RIGHT indicate the left and right sides of the tractor when facing forward in the driver's seat. Reference to FRONT indicates grille end of the tractor; to REAR, the drawbar end.

Chassis serial number plate is located near left rear fender. (See Figure 1.)

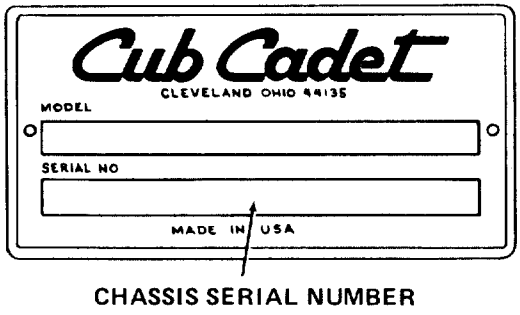


Figure 1

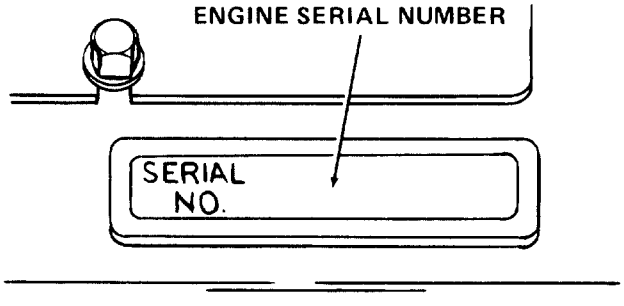


Figure 2

MODEL _____

DELIVERY DATE _____

CONTROLS

Your *Cub Cadet* Tractor has been safety engineered. Thoroughly acquaint yourself with all the instruments and controls before attempting to start or operate the tractor.

A. FUSE

The fuse is installed to protect the tractor's electrical circuitry and components from damage caused by excessive amperage overload. (See Figure 3 or 4.)

B. CHOKE CONTROL

The choke control is operated manually. Pull knob out to choke engine. Push knob in to open choke. (See Figure 3 or 4.)

C. BRAKE PEDAL

NOTE

Do not rest your foot on the single brake pedal while driving the tractor as this would cause the speed control lever to return to the "N" position.

Brake pedal must be pressed all the way down to activate the safety starting switch. When brake pedal is in the depressed position, it automatically moves the speed control lever to the "N" position, if the linkage is properly adjusted. (See Figure 3 or 4.)

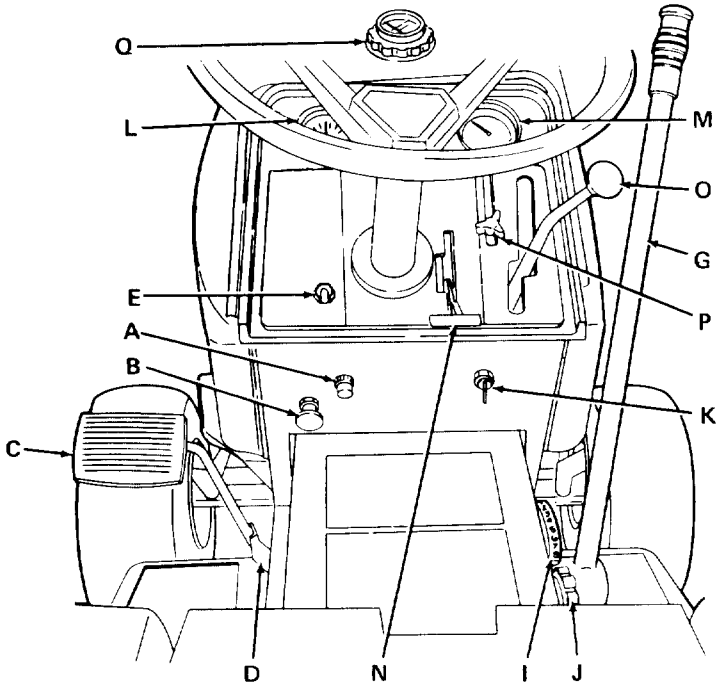


Figure 3. (1210 Tractor)

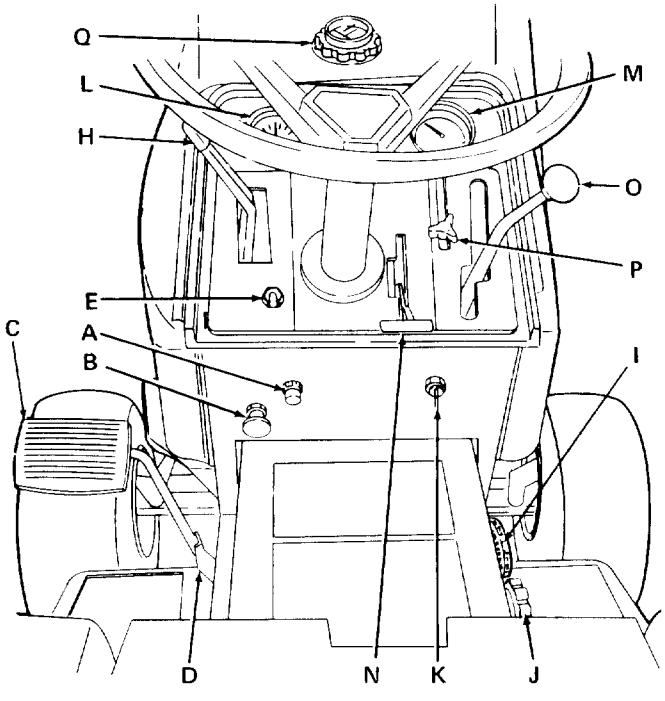


Figure 4. (1211 Tractor)

- A. Fuse
- B. Choke Control
- C. Brake Pedal
- D. Brake Pedal Lock
- E. Power Take-Off Control Switch
- F. Interlock Safety Switches (Not Shown)
- G. Lift Handle (1210 Only)
- H. Hydraulic Lift Control Lever (1211 Only)
- I. Lift Height Indicator
- J. Cam Lock Knob
- K. Ignition/Light Switch
- L. Charge Indicator
- M. Hour Meter
- N. Throttle Control Lever
- O. Speed Control Lever
- P. Speed Control Stop
- Q. Fuel Tank Filler Cap Gauge

The tractor can be stopped either by pressing the pedal all the way down or by placing the speed control lever in the "N" position.

D. BRAKE PEDAL LOCK

WARNING

The hydrostatic transmission will not hold the tractor on a hill. In a short period of time (depending on the steepness of the hill) the oil will drain from the transmission and allow the tractor to roll downhill. To avoid an accident and/or possible injury, lock the brake.

Always lock the brake when tractor is parked on a grade. To lock the brake, depress brake pedal and place the brake pedal lock in the engaged position. (See Figure 5.) To disengage the lock, press down on the pedal, lift the lock up and place it in the disengaged position.

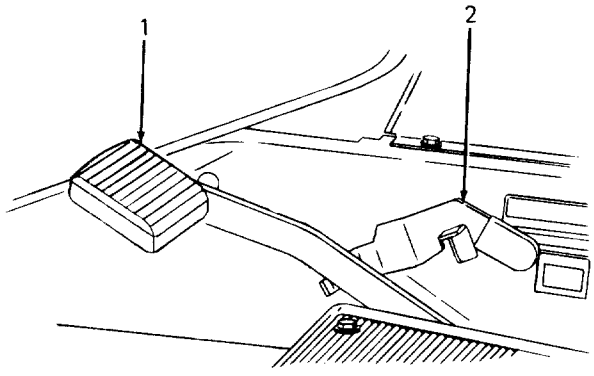


Figure 5

1. **Brake Pedal**
2. **Brake Pedal Lock**

E. FRONT POWER TAKE-OFF CONTROL SWITCH

The power take-off (PTO) control switch, which is located on the left side of the instrument panel (see Figure 3 or 4), operates an electric clutch. This electric clutch controls the engagement ("RUN") or disengagement ("OFF") of the front PTO.

F. INTERLOCK SAFETY SWITCHES

CAUTION

The engine will not start unless:

1. The brake pedal is depressed.
2. The PTO switch is in the "OFF" position.
3. The operator is seated.

When using PTO-operated equipment, the operator must remain in tractor seat at all times. If operator should leave tractor seat without turning off the PTO switch, the PTO will automatically disengage.

Interlock safety switches are activated by the brake pedal, the PTO switch located on the control panel, and a switch located underneath the operator's seat.

The interlock safety switches, activated by the brake pedal, PTO switch and seat switch serve to prevent starting the engine accidentally. The engine will not start unless: 1. the brake pedal is depressed, 2. the PTO is in the "OFF" position, 3. the operator is seated.

The reverse switch is located on the underside of the pedestal. It is activated by the speed control lever. The reverse switch will disengage PTO switch if the speed control lever is placed in reverse when the PTO switch is in the "RUN" position.

G. LIFT HANDLE (1210 Tractor Only)

The lift handle is used to lift and lower equipment used with the tractor. The equipment can be set in multiple positions by depressing the button on the handle and releasing it when the desired position is reached.

An additional feature has been provided to give increased float capability to the deck by depressing the button and rotating the pin into the slot as shown in Figure 6.

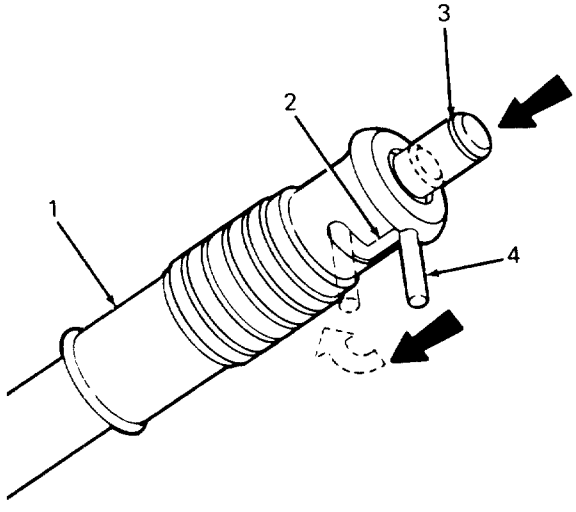


Figure 6. (1210 Tractor Only)

1. **Lift Handle**
2. **Slot**
3. **Button**
4. **Pin**

H. HYDRAULIC LIFT CONTROL LEVER (1211 Tractor Only)

NOTE

The engine must be running in order to operate the hydraulic lift.

The hydraulic lift control lever (see Figure 7) controls the raising and lowering of a mowing deck, if installed. The control lever is spring-loaded. To raise the equipment, move the lever back toward the tractor seat. To lower the equipment, move the lever forward.

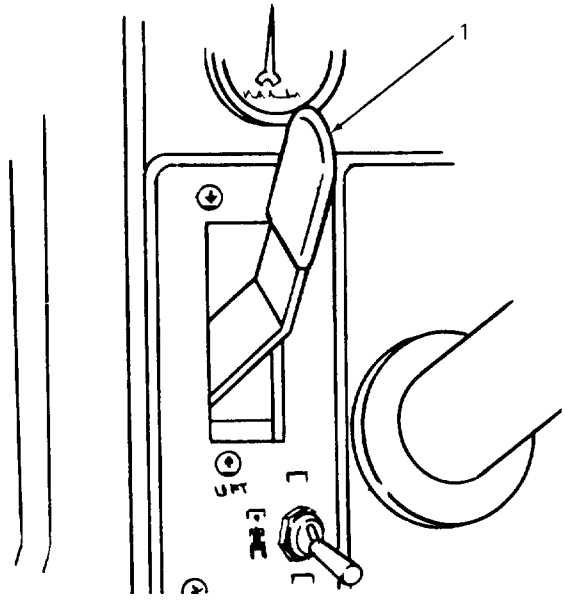


Figure 7. (1211 Tractor Only)

1. Hydraulic Lift Control Lever

I. LIFT HEIGHT INDICATOR

The lift height indicator will indicate the height of deck attachment when installed. (See Figures 8 and 9.)

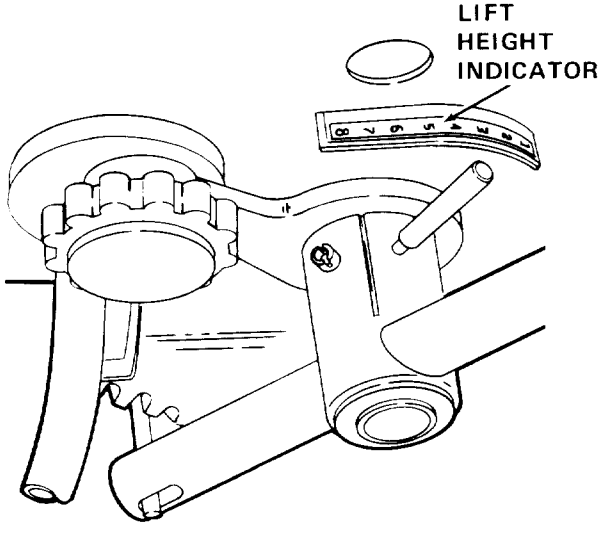


Figure 8. (1210 Tractor)

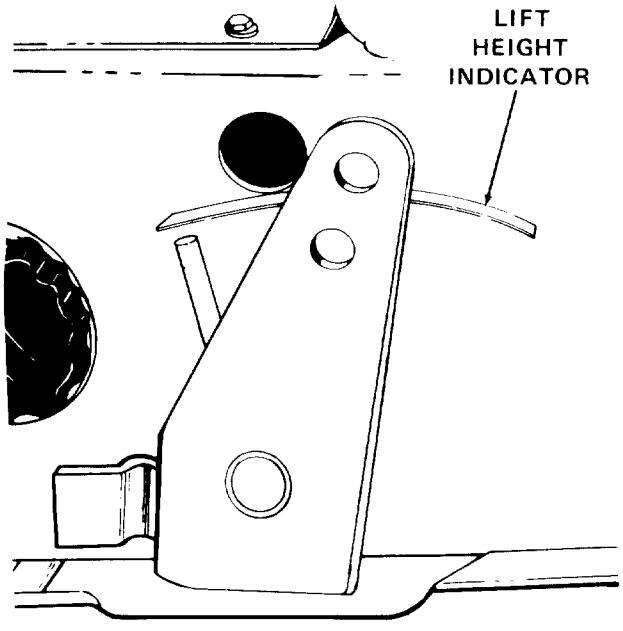


Figure 9. (1211 Tractor)

J. CAM LOCK KNOB (1210 Tractor Only)

The cam stop may be adjusted to allow the implement to return to a single height. (See Figure 10.)

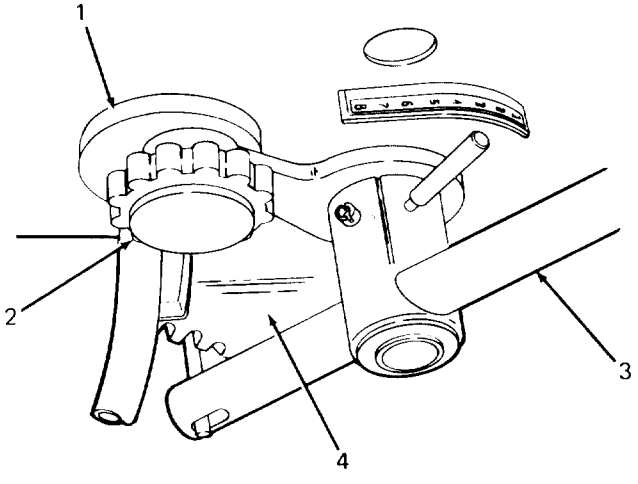


Figure 10

1. Cam Stop
2. Locking Knob
3. Lift Handle
4. Lift Bracket

With implement in desired height position, release cam stop by turning locking knob counterclockwise. Turn cam stop until it contacts lift bracket on lift handle. Lock cam stop into this position by turning cam knob clockwise.

NOTE

Refer to the equipment manual for proper hitching instructions.

CAM LOCK KNOB (1211 Tractor Only)
The cam lock knob is used to adjust the cam stop, which will allow an attached implement to return to a single preset height. (See Figure 11.)

With the implement at a desired height, release cam stop by turning locking knob counterclockwise. Turn cam stop until it contacts tang on rockshaft. Lock cam stop into this position by turning cam knob clockwise.

Equipment is normally operated in a "Float" position (implement free to move upward).

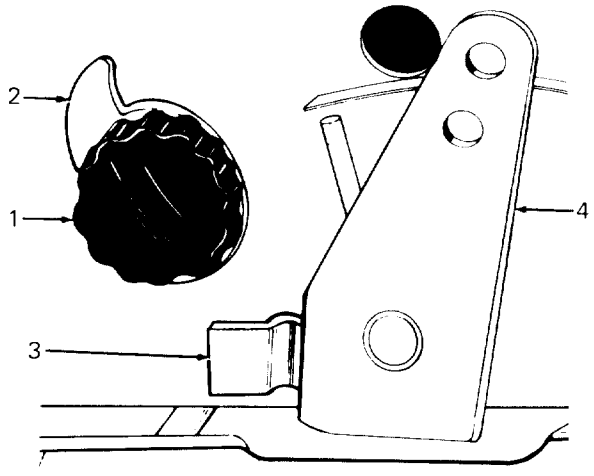


Figure 11. (1211 Tractor Only)

1. Locking Knob
2. Cam Stop
3. Tang
4. Rockshaft

To operate equipment in a fixed "Locked" position where down pressure of the implement is required (blade work), remove frame cover and install bolt, 1/2 x 1-1/8 inch (not furnished with tractor), between the lift arm and lift bracket. (See Figure 12.)

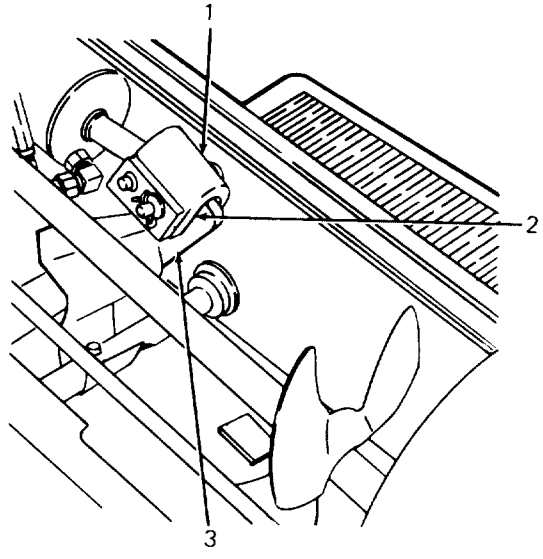


Figure 12. (1211 Tractor Only)

1. Lift Bracket
2. Hole (Not Seen) For Bolt
3. Lift Arm

K. IGNITION/LIGHT SWITCH

WARNING

Remove the key from the tractor when the tractor is not in use to prevent accidental starting and battery discharge.

The combination lights and ignition switch is a four-position switch. (Refer to Figure 13.)

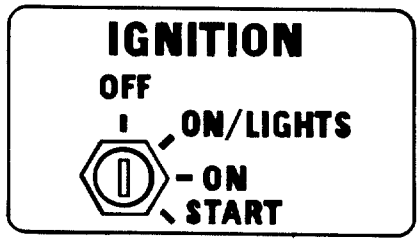


Figure 13

L. CHARGE INDICATOR
This instrument indicates whether the alternator is charging or the battery is discharging. If it shows discharge continuously, investigate the cause to avoid completely discharging the battery and possible damage to the charging circuit. (See Figure 3 or 4.)

M. HOUR METER
The hour meter is located on the instrument panel. (See Figures 3, 4 or 14.) It indicates the actual hours of engine operation, enabling the operator to determine without guesswork when lubrication, change of oil or periodic inspections are necessary. It also provides a means of computing cost of specific jobs. The hour meter operates whenever the engine is running or the ignition key is in the "ON" position.

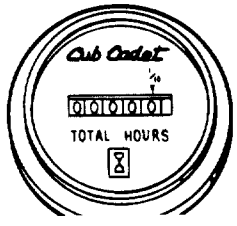


Figure 14

N. THROTTLE CONTROL LEVER
This lever controls the speed of the engine. When set in a given position, it will maintain a uniform engine speed. (Refer to Figure 3 or 4.)

When using power take-off operated equipment, best performance is achieved with the throttle lever in the "FAST" position.

This symbol shows slow position.

This symbol shows fast position.

O. SPEED CONTROL LEVER

NOTE

Do not rest your foot on the single brake pedal while driving the tractor as this would cause the speed control lever to return to the "N" position.

The lever is used to select any speed from a standstill "N" position to eight miles per hour in the forward direction and four miles per hour in the reverse direction.

Moving the speed control lever forward provides increased forward speed, and moving the lever rearward provides the reverse speeds. (See Figure 3 or 4.)

P. SPEED CONTROL STOP

An adjustable speed control stop is provided to allow the operator to return to a predetermined speed. (See Figure 3 or 4.)

Q. FUEL TANK FILLER CAP GAUGE

The fuel tank filler cap gauge indicates how much fuel is present in the fuel tank. It also works as the fuel tank cap. Remove the fuel tank filler cap gauge to fill the fuel tank. Reinstall filler cap after filling tank. (See Figure 3 or 4.)

FUEL SHUT-OFF VALVE

The fuel shut-off valve which is located below the gasoline tank is used as a main fuel shut-off to the engine. To turn the fuel on, turn the knob counterclockwise to the stop. To turn the fuel off, turn the knob clockwise until it is tight.

HOOD AND NOISE ISOLATION PANELS

The tractor hood is arranged to swing up and forward for easy access to the engine compartment. Whenever engine maintenance is required, the noise isolation panels can be readily removed by removing the two wing nuts and two washers (one on each side) and disconnecting the panel spring. (See Figure 15.)

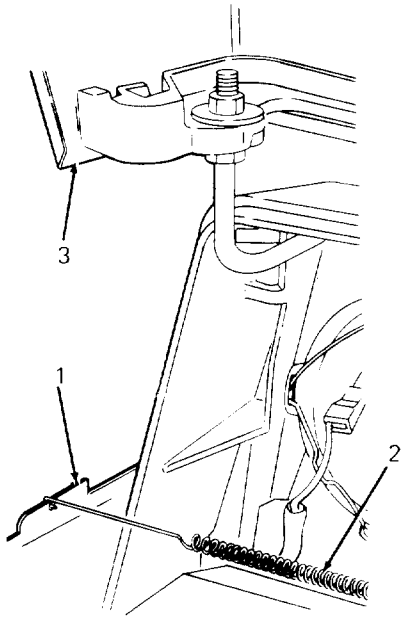


Figure 15

1. **Noise Isolation Panel (One on Each Side)**
2. **Panel Spring**
3. **Hood**

OPERATION

WARNING

RECEIVE INSTRUCTION - Read operator's manual. Learn to operate this machine SAFELY. Don't risk INJURY or DEATH.

1. Before starting engine or operation: Be familiar with controls. Be in operator's position with transmission in neutral, PTO turned off, and brake depressed.
2. Keep shields in place. Stay away from moving parts.
3. NO RIDERS! Keep all people and pets a safe distance away. Look before backing up.
4. Don't point mower discharge at people.
5. Avoid slopes. Tractors can be rolled over.
6. Before leaving operator's position: Shut off PTO. Place transmission in neutral. Set parking brake. Shut off engine. Remove ignition key. Wait for all movement to stop before servicing or cleaning.
7. Do not fill gasoline tank when engine is running or while engine is hot. Tighten cap securely.

BEFORE OPERATING YOUR TRACTOR

1. Before you operate the tractor, study this manual carefully. It has been prepared to help you operate and maintain your tractor with utmost efficiency.
2. Familiarize yourself with the operation of all the instruments and controls.
3. Fill the tank with either lead-free, low-lead or regular gasoline. Make sure before you fill the tank that the gasoline is clean and fresh.
4. Check the engine and transmission oil levels.
5. Clean the air cleaner element if necessary.
6. Check tire inflation pressures.
7. Adjust the seat for operator's maximum comfort, visibility and complete control of the tractor.
8. Remove the noise isolation panels and clean any accumulated grass and debris from the intake fan on engine.
9. Make certain that the backside of the grille is clean and unobstructed. Pull forward on top edge to expose rear side of grille. Remove by hand any accumulated grass and debris.
10. Refer to various sections of the Owner's Manual for additional information.

STARTING THE ENGINE

WARNING

Do not operate tractor if the interlock system is malfunctioning. It is a safety device designed for protection of the operator.

NOTE

This unit is equipped with a safety interlock system for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the single brake pedal is depressed, the PTO switch is in the "OFF" position and the operator is seated.

NOTE

This unit can be equipped with an optional disconnect clutch.

NOTE

This disconnect clutch is mounted on the engine to transmission drive shaft. The purpose of the disconnect clutch is to allow the engine to start before the transmission is engaged. This will greatly reduce the load on the engine when it is started, thus making it easier to start the engine. (See Figure 16.) It is available through your authorized *Cub Cadet* dealer.

NOTE

This disconnect clutch should be installed by your authorized *Cub Cadet* dealer.

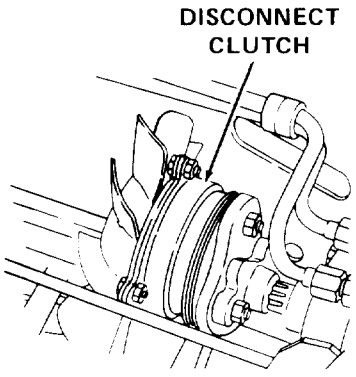


Figure 16

1. Operator must be seated.
2. Pull choke control button to full choke position. Less choking may be necessary due to variations in temperature, grade of fuel, etc. Little or no choking will be needed when the engine is warm.
3. Place the throttle just off "SLOW" position.
4. Place the PTO switch to the "OFF" position.
5. To start the engine, safety starting switches must be activated by pressing the brake pedal all the way down.

NOTE

The speed control lever will automatically return to neutral when the single brake pedal is pressed all the way down, and the linkage is properly adjusted.

6. Turn the ignition key clockwise to the "START" position and release it as soon as the engine starts: however, do not operate the starter for more than 10 seconds at any one time. If the engine does not start within this time, turn the key "OFF" and wait a few minutes, then try again.
7. After the engine starts, slowly release the single brake pedal and gradually push the choke control button all the way in. Do not use the choke to enrich the fuel mixture, except as necessary to start the engine.

STOPPING THE ENGINE

CAUTION

Remove the key to prevent accidental starting and battery discharge if equipment is left unattended.

Move the throttle lever to the "SLOW" position and allow the engine to idle for a short time before stopping. Then turn the key to the "OFF" position. Remove key from ignition switch.

TRACTOR BREAK-IN PROCEDURE

CAUTION

Never operate a new engine immediately under full load. Break it in carefully as shown in the table below.

Period	Engine Throttle Control Lever Position			Load
	1/2	3/4	Full	
1st hour		X		None
2 hour	X		X	Light drawbar load or Mowing with tractor at slow speed
3rd through 13th hour		X	X	Medium drawbar load or Normal mowing

COLD WEATHER STARTING

WARNING

During operation do not run the engine in confined area such as storage building any longer than is necessary. Immediately move the tractor outside into the air.

NOTE

In cold weather the starting motor may disengage prematurely. This is caused by the engine firing once but failing to continue running. If this happens several times, the engine will be flooded and it will be necessary to leave the throttle in the "SLOW" position but push the choke knob in all the way; then turn the ignition key to the "START" position and slowly pull the choke knob out to the position which will cause the engine to start and continue running. If the engine falters after putting tractor into motion, pull the choke knob out part way until the engine runs smoothly, then gradually push the choke back in as the engine warms.

Engine starting is possible in cold weather providing the correct weight of engine oil is used, the battery is fully charged, and the proper starting procedure is followed. The best procedure for starting at temperatures near or below freezing is as follows:

1. Pull the choke all the way out to the full choke position.
2. Move the throttle lever just off "SLOW" position.
3. Press the brake pedal all the way down and be sure the PTO switch is in the "OFF" position. The safety interlocks will prevent starting unless this is done.
4. Move the key switch into the "START" position and hold until the engine starts; however, do not operate the starter for more than 10 seconds at any one time. As soon as the engine starts, slowly push the choke knob in part way.

DRIVING THE TRACTOR

CAUTION

Avoid sudden starts, excessive speed, and sudden stops. Keep tractor in gear when going down hills.

CAUTION

Do not leave the seat of the tractor without depressing the brake pedal and setting the brake lock. If leaving the tractor unattended, also turn the ignition key off and remove the key.

NOTE

When using power take-off operated equipment, best performance is achieved with the throttle lever in the "FAST" position.

1. Depress the brake pedal, release the brake lock, and let the pedal up. Move the throttle lever to the position where the engine operates best for the load to be handled.
2. Start the tractor in motion by moving the speed control lever slowly forward or rearward to desired speed.

DRIVING ON SLOPES (Refer to "SLOPE GAUGE" on page 31 in order to help determine slopes where you may not operate safely.)

WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury.

WARNING

Operate RIDING mowers up and down slopes, never across slopes.

CAUTION

Always drive up or down the face of a slope. Do not drive so that the tractor may tip over sideways.

Before operating the tractor on any slope, walk the slope to look for possible hazards such as rocks, mounds, ruts, stumps or other surface irregularities which could cause an upset.

Back the tractor with implement up the steepest portion of each slope you intend to work. If the tractor cannot negotiate the slope in reverse, the slope is too steep to be worked.

Avoid turns when driving on a slope. If a turn must be made, turn down the slope. Turning up a slope greatly increases the chance of a roll over.

Avoid stopping when driving up a slope. If it is necessary to stop while driving up a slope, start up smoothly and carefully to reduce the possibility of flipping the tractor over backward.

STOPPING THE TRACTOR

CAUTION

Always engage brake pedal lock, lower equipment and shut off engine before dismounting. Never try to start engine from ground.

Move the speed control lever to the neutral "N" position or use the single brake pedal. Before dismounting always lock the brake pedal and turn the ignition "OFF". Also disengage the PTO switch.

DRAWBAR

Drawbar equipment must be hitched to the tractor only at the hitch hole in the drawbar. (See Figure 17.)

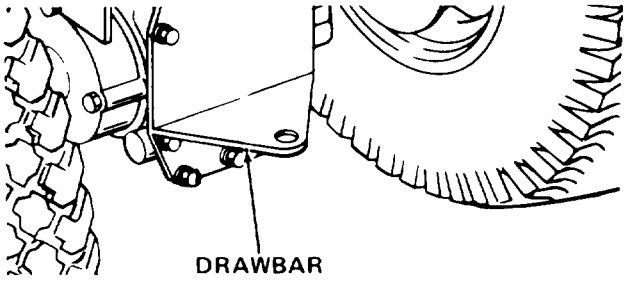


Figure 17

OPERATING THE FRONT POWER TAKE-OFF CLUTCH (PTO)

NOTE

Be certain to follow break in instructions listed below.

1. Move the throttle lever back to the medium or "SLOW" position.
2. Flip the toggle switch to the "ON" position.
3. Advance throttle to operating speed (full speed).
4. The operator must remain in tractor seat at all times. If operator should leave tractor seat without turning off the power take-off switch, the PTO will automatically disengage.
5. PTO switch must be in the "OFF" (A) position when shifting the tractor into reverse or the PTO will shut off automatically. (See Figure 18.) To re-engage the PTO, shift unit into neutral. Move PTO switch to "OFF" (A) position. Then pull knob out and lift up to "START" (B) position and release.

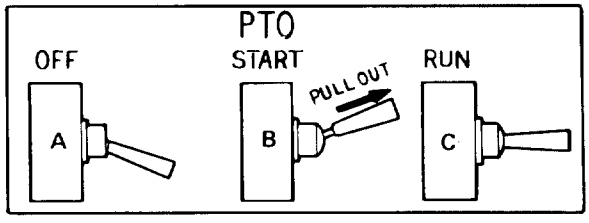


Figure 18

FRONT PTO CLUTCH BREAK-IN PROCEDURE

To break in the components and increase the life of the clutch assembly, proceed as follows.

1. Attach mowing deck, snow thrower, etc. to the tractor.
2. Adjust the belt tension as recommended in attachment owner's manual.
3. Engage and disengage the PTO ten to fifteen times without any load (not cutting grass, not blowing snow, etc.).

ADJUSTMENTS

ADJUSTING THE SEAT

Before starting the tractor, adjust the seat to the most comfortable driving position. Tilt the seat forward over the steering wheel, loosen the four cap screws in the seat support, and slide the seat assembly forward or rearward to the position which is most comfortable for the operator. (Refer to Figure 19.)

Retighten the cap screws after the seat is adjusted.

NOTE

The battery is located in a well under the operator's seat for ease in servicing or replacement when necessary.

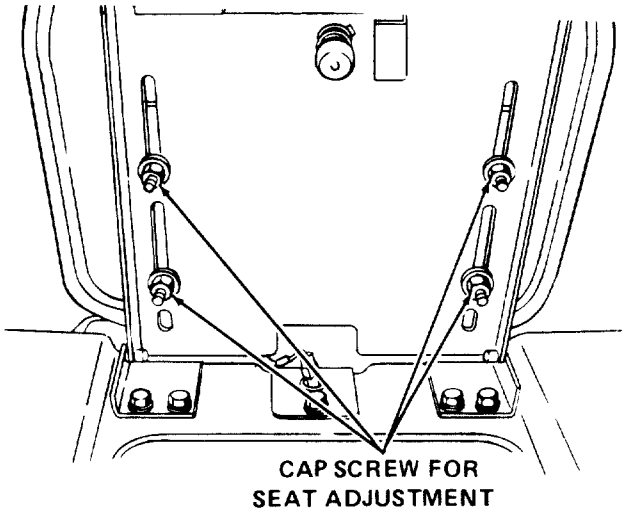


Figure 19

ADJUSTING THE POWER TAKE-OFF CLUTCH

WARNING

To avoid possible injury, always disengage all clutches, move speed control or gear shift lever into neutral, depress the brake, set the brake pedal lock and turn the ignition "OFF" before working on the machine.

The clutch is factory-adjusted and should not require further adjustment under normal operating conditions. However, if the clutch fails to operate properly, check as follows:

Check fuse on pedestal.

Using a feeler gauge, check the air gap. (See Figure 20.) Insert feeler gauge into one of three access slots located around the outside of the brake plate. The air gap should be .017 inch. Adjust the self-locking nuts to obtain the proper clearance. Repeat the operation in all three access slots.

ADJUSTING THE BRAKES

Brake adjustment:
During normal operation of this machine, the brakes are subject to wear and will require periodic examination and adjustment.

Brake adjustment check:

1. To check brake adjustment, place a 1/2 inch thick wood block between the single brake pedal and the brake pedal lock. (See Figure 21.)

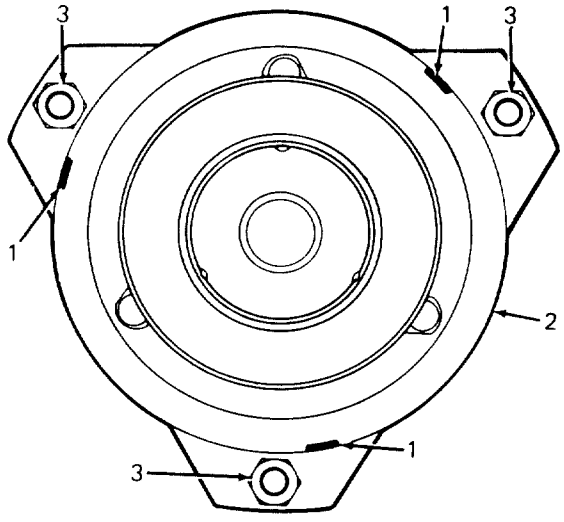


Figure 20

1. **Access Slots**
2. **Brake Plate**
3. **Self-Locking Nuts**

2. With the 1/2 inch thick wood block installed, the brake disc pads should be applying a light amount of friction against the brake disc rotor. If they are not, the brakes need adjustment. (See Figure 23.)

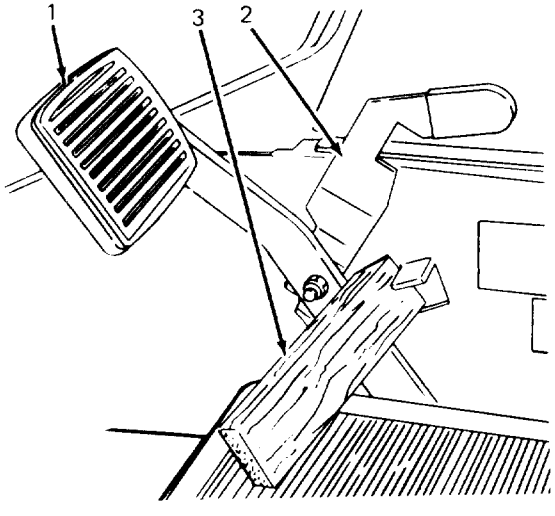


Figure 21

1. **Single Brake Pedal**
2. **Brake Pedal Lock**
3. **1/2 Inch Thick Wood Block**

With the brake pedal disengaged, remove the clevis pinned end of one of the brake rod assemblies from the jackshaft assembly by removing the cotter pin from the clevis pin. (See Figure 22.)

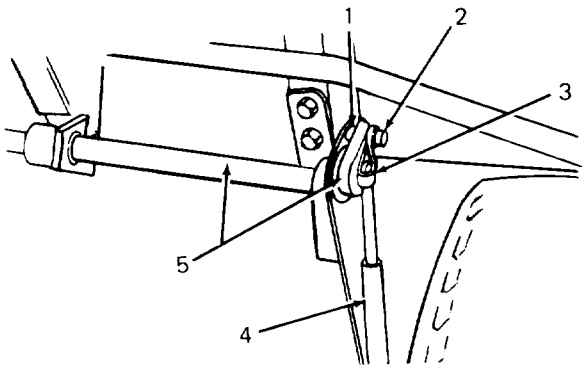


Figure 22

1. **Cotter Pin**
2. **Clevis Pin**
3. **Clevis**
4. **Brake Rod Assembly**
5. **Jackshaft Assembly**

Thread the clevis onto the brake rod one turn. Reconnect the clevis to the jackshaft assembly. There should be a minimum amount of clearance (no drag) between the brake pads and the rotor. If not, repeat adjustment as necessary. (See Figure 23.)

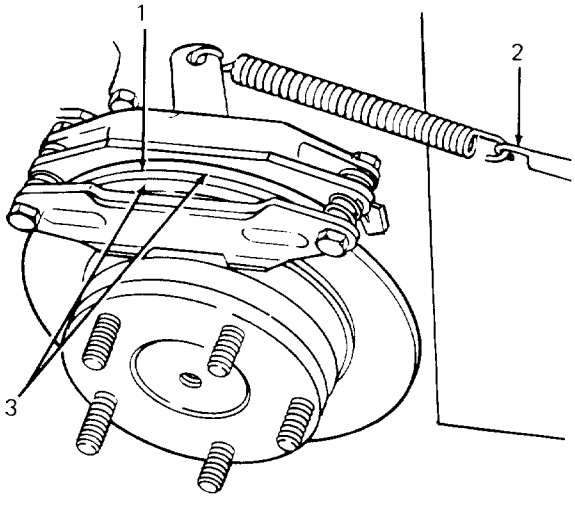


Figure 23

1. **Rotor**
2. **Brake Rod Assembly**
3. **Brake Pads**

NOTE

Figure 23 is shown with the wheel and fender assembly removed for clarity.

Repeat the adjustment on the brake rod assembly on the other side of the tractor.

Recheck brake adjustment per **Brake adjustment check** and ensure proper brake operation before operating the tractor.

WHEEL ALIGNMENT

The front wheels should toe-in approximately 1/8 inch.

Measure the distances A and B on the front wheels. (Refer to Figure 24.)

NOTE

Dimension B should be approximately 1/8 inch less than dimension A.

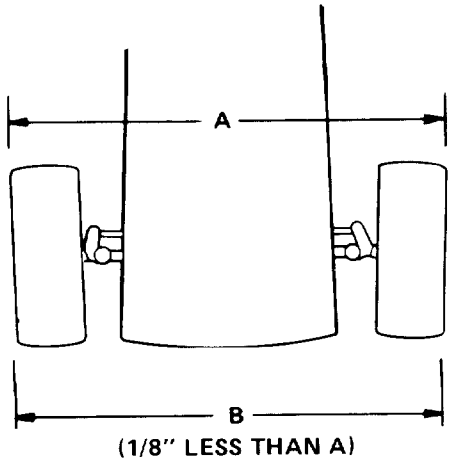


Figure 24

FRONT WHEEL ADJUSTMENTS

To adjust the toe-in remove one ball joint, loosen lock nuts "C" and "D" at the ball joint and turn the tie rod ball joint in or out as required. (Refer to Figure 25.)

TURNING RADIUS

CAUTION

Be sure all parts are reassembled tight with cotter pins in place and spread.

The front wheels should have an equal angle for left and right turns. If adjustment is necessary, remove ball joint and loosen lock nut "D," turn the drag link ball joint clockwise or counterclockwise as required. (See Figure 25.)

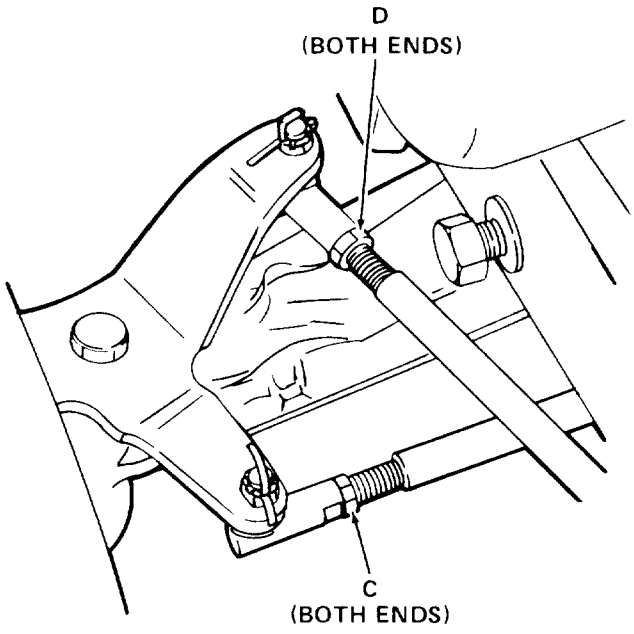


Figure 25. Tie Rod and Drag Link Ball Joints

PIVOT BAR ADJUSTMENT BOLTS

CAUTION

The tractor must be checked every 50 hours of tractor operation for play between the front axle and the pivot bar adjustment bolts. Both adjustment bolt heads must fit against the front axle. If play is discovered, the pivot bar adjustment bolts must be adjusted.

If play is discovered between the front axle and the pivot bar adjustment bolt heads, adjust both bolts as follows: (Refer to Figure 26.)

1. Loosen jam nut 3 to 4 turns or as required.
2. Turn pivot bar adjustment bolt counterclockwise until it hits against the front axle.
3. Tighten jam nut.
4. Repeat the above steps for the other pivot bar adjustment bolt.

CARBURETOR ADJUSTMENTS

WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Stay clear of all moving parts and be careful of heated surfaces and muffler.

WARNING

To avoid injury or an accident, be sure the brake pedal is in the locked position, transmission is in neutral, and any equipment is disengaged before starting engine to make carburetor adjustments.

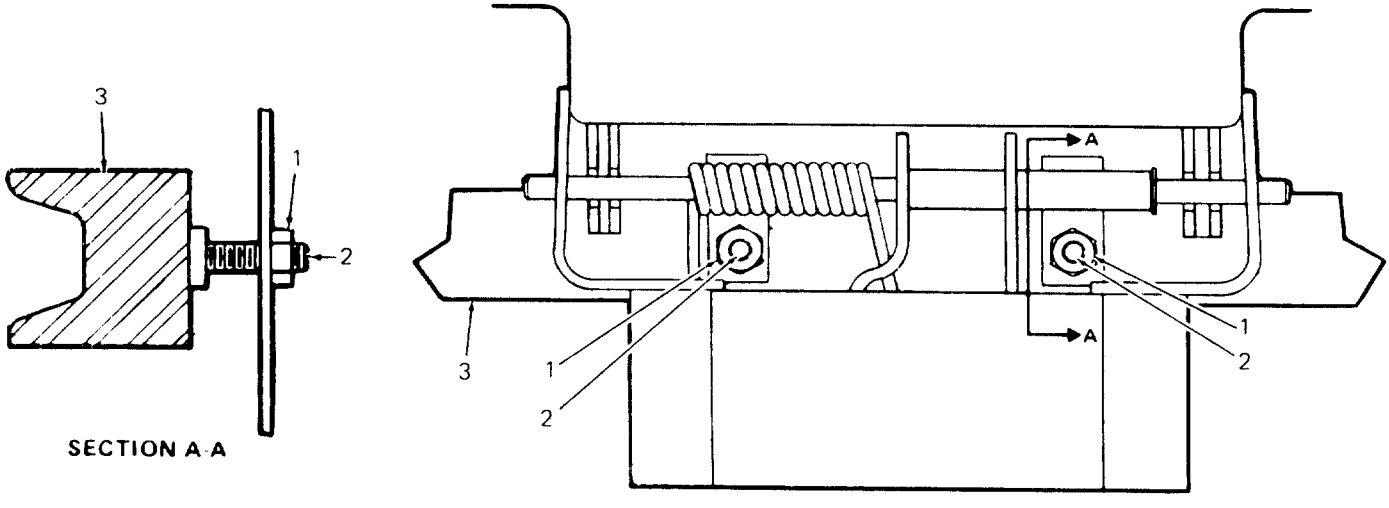


Figure 26

1. **Jam Nut**
2. **Pivot Bar Adjustment Bolts**
3. **Front Axle**

WARNING

Carbon monoxide fumes can be fatal! Do not make any adjustment to the carburetor in a confined area such as a storage building. Move the tractor outside into the air.

NOTE

The tractors covered in this manual will be equipped with a fixed-jet carburetor.

The carburetor is adjusted at the factory, and under normal operating conditions, it will not require readjusting. However, if the engine does not operate properly, what may appear to be a faulty carburetor adjustment is in many cases a clogged air filter. This possibility should be ruled out before attempting to readjust carburetor. Refer to **"MAINTENANCE"** section in this manual.

To prevent possible damage to the carburetor needles, be very careful closing the carburetor needles before basic adjustments are made. Improper adjustment of the carburetor may result in engine damage.

IDLE SPEED ADJUSTMENT

Run engine at maximum governed, no load speed for a minimum of 30 seconds, then allow engine speed to fall to idle or put throttle into idle position. Set engine speed to 1800 (+ or – 75 RPM) by turning the idle speed screw in or out. (See Figure 27.)

IDLE FUEL ADJUSTMENT

Set the idle fuel mixture by turning the idle fuel screw out, from the closed position, 3/4 to 1-1/4 turns. (See Figure 27.)

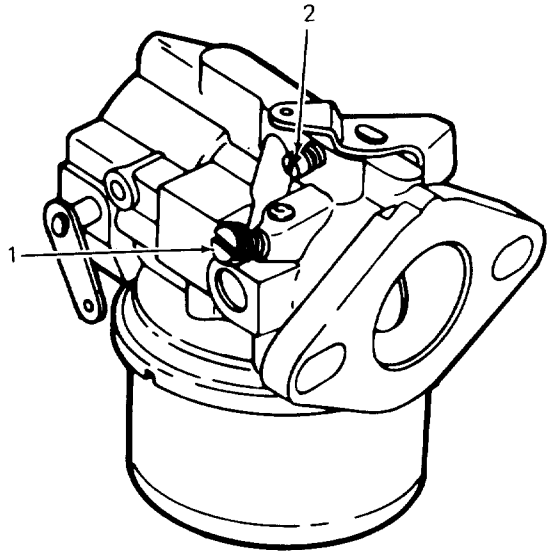


Figure 27. Tractors With Fixed-Jet Carburetors

1. **Idle Fuel Adjustment Screw**
2. **Idle Speed Adjustment Screw**

MAINTENANCE

ENGINE OIL

The engine crankcase is filled with ship-away oil. This oil may be used for the first 5 hours of engine operation at temperatures between 0 degrees F and 90 degrees F. If temperatures are not within this range, drain the oil from the oil filter and crankcase and replace with new oil as specified in the **"LUBRICATION TABLE."**

To aid starting, the selection of crankcase lubricating oils should be based on the lowest anticipated temperatures until the next drain period.

Cub Cadet Low Ash Engine Oil meeting API Service Classification SF is recommended. For maximum engine life select API SF oils with lowest levels of barium, calcium, or magnesium additives and minimum ash content (approximately 0.5%). Lubricant suppliers will normally furnish this information on their engine oils.

Multi-viscosity numbered oils such as SAE 10W-30 or SAE 10W-40 can be used above 32 degrees Fahrenheit.

Regularly check the oil level of the engine crankcase to see that it is filled to the correct level. Always keep the oil level between the "FULL" and the "LOW" marks on the dipstick. When checking the oil level the dipstick must be withdrawn and wiped clean, then inserted all the way and withdrawn for a true reading.

NOTE

Check the oil level only while the engine is stopped and tractor is level.

NOTE

During initial break-in period the engine oil level should be checked frequently.

FILLING THE CRANKCASE

To fill the crankcase with oil, place the tractor on a level surface. Clean the area around the oil fill tube and dipstick to prevent debris from entering the crankcase.

NOTE

Never overfill the engine crankcase. Engine may overheat and/or damage may result if the crankcase is below the "LOW" mark or over the "FULL" mark. For oil capacity refer to the **"SPECIFICATIONS"** and **"LUBRICATION TABLE"** sections.

Remove the oil fill cap and dipstick and fill to the full mark on the dipstick. POUR SLOWLY. The oil capacity is 4 pints. When checking the oil level, push the dipstick assembly firmly but slowly until cap bottoms on tube. DO NOT OVERFILL. Dipstick assembly MUST BE PUSHED FULLY INTO TUBE AT ALL TIMES WHEN ENGINE IS OPERATING.

HYDROSTATIC DRIVE HYDRAULIC FLUID FILTER

NOTE

Clean the outside area before removing the filter to keep dirt from getting into the transmission case. If a mower is mounted on the tractor, the mower must be lowered to facilitate removal of the filter.

Remove the throw away can type filter and replace with a new filter after the first 10 and 50 hours of operation, and every 100 hours of operation thereafter.

To remove the filter, turn the filter counterclockwise using an automotive-type filter wrench.

Before installing the new filter, apply a coating of oil on the filter gasket. Thread the new filter on by hand until tight enough to seat the gasket. Loosen the filter. Then turn it until the gasket contacts the base. Tighten the filter an additional one-half turn. Start engine and allow it to run for a few minutes. Shut engine off and check for leaks: check oil level in transmission case.

AIR CLEANER

All engine air used for combustion is filtered by a dry-type air cleaner to assure long engine life.

NOTE

Left side engine panel must be removed to have access to the air cleaner.

Service the air cleaner element when a loss of power is noticeable. Discard used element and replace with a new one at least once a year.

Cleaning the element: The left hand side panel must be removed to obtain access to the air cleaner housing. To clean the element, remove the wing nut and air cleaner cover. (See Figure 28.) Remove the element from the backplate. Take care to avoid dislodging accumulated dust on the element into the carburetor inlet. Tap the element lightly on a flat surface for cleaning. Do not wash or use solvents to clean elements.

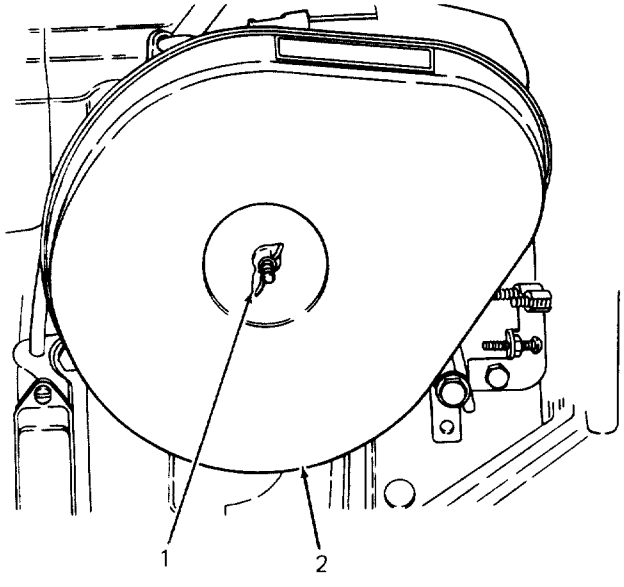


Figure 28

1. **Wing Nut**
2. **Air Cleaner Cover**

Replacing the element: If the perforated metal sleeve is dented or the sealing surface damaged, discard and install a new element. When replacing an element, always examine the air cleaner backplate and be sure it is securely tightened to the carburetor. Install a new backplate if the old one is bent or cracked.

Be sure the element fits around the ledge on the backplate before installing air cleaner cover. Replace the cover (rubber gasket must be in place) and tighten the wing nut securely. Do not use pliers, finger tight is adequate. Reinstall the side panel.

Properly cleaned and installed air cleaner elements are the best guarantee to continued long and satisfactory engine life.

CLEANING ENGINE

This tractor has an air-cooled engine. Air must be able to circulate freely around the engine, through the screen, shroud, and over the fins of the cylinder head and cylinder block. Keep these areas free of accumulated dirt and trash or engine will overheat and result in damaged moving parts. Periodically clean the inside of the side panels and grille for adequate cooling.

NOTE

This machine is designed to cool properly with the engine side panels in place. Operating the machine without panels in place may result in inadequate cooling.

SPARK PLUGS

WARNING

To avoid possible injury, be sure engine is off and cool before making any adjustment or repairs.

NOTE

Remove all dirt from around the spark plugs before removing.

To remove spark plugs, always use a spark plug wrench. Check gap after every 100 hours of operation.

Replace a defective plug with a new plug. Set gap at .025 inch. (Refer to Figure 29.) Tighten plug to 22 ft-lbs. See your authorized dealer for the correct replacement plug.

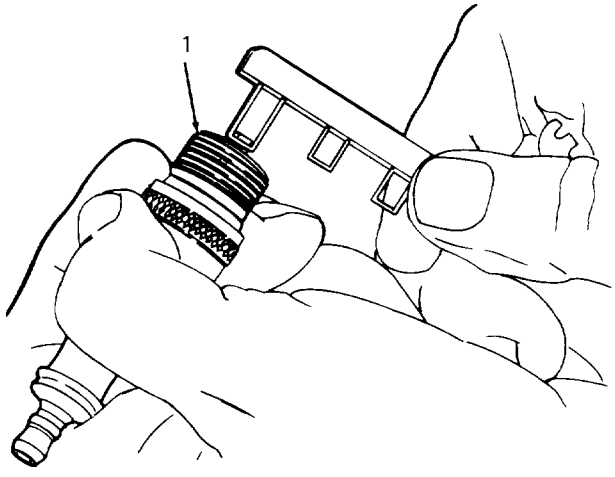


Figure 29

1. Spark Plug

CLEANING OF CYLINDER HEADS

Cleaning of the cylinder heads should only be done by your authorized *Cub Cadet* Dealer. This process is to be done to keep your engine properly cooled and at its peak efficiency. The frequency of cleaning is dependent upon the type of fuel used. When leaded fuel is used the cleaning interval is 250 hours, and with unleaded fuel the cleaning interval is 500 hours.

LIGHTS

The headlights are sealed-beam units. Refer to **"SPECIFICATIONS"** when replacement is necessary.

To replace the taillight lamp, remove socket and bulb from the back of the taillight by rotating socket 1/4 turn. Refer to **"SPECIFICATIONS"**.

FUSE

Always use the same capacity fuse for replacement. Refer to **"SPECIFICATIONS."** If electrical system malfunctions, check the fuse.

To install a new fuse, press in on the fuse housing cap and turn counterclockwise to remove it from the fuse housing. Remove the old fuse and replace with a new one. Then reassemble the cap to the housing.

BATTERY INFORMATION

WARNING

A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it.*

B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean cold water. If there is any further discomfort, seek prompt medical attention.

C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.

E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.

F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.

G. As a further precaution, only charge the battery in a well-ventilated area.

* Always shield eyes and protect skin and clothing when working near batteries.

DANGER

BATTERIES CONTAIN SULFURIC ACID AND MAY CONTAIN EXPLOSIVE GASES (when electrolyte has been added).

KEEP BATTERIES OUT OF THE REACH OF CHILDREN.

MAINTENANCE OF BATTERY

1. Check electrolyte level periodically (at least every two weeks). Keep the level to the split rings. Use only distilled water or a good quality drinking water. Never add acid or any other chemicals to the battery after initial activation.

2. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225, the battery should be recharged. Maximum charge rate is 5 amps.

3. Coat the terminals and exposed wire with a thin coat of grease or petroleum jelly for longer service and protection against corrosion.

4. The battery should be kept clean. Any deposits of acid should be neutralized with baking soda and water. Be careful not to get this solution in the cells.

5. Avoid tipping the battery. Even a "sealed" battery will leak electrolyte when tipped.

STORAGE OF THE BATTERY

1. When storing battery for extended periods, disconnect battery cables. Removing battery from unit is recommended.

2. Keep the exterior of the battery clean, especially the top. A dirty battery must be stored with a full charge. A dirty battery will discharge itself.

3. Check the battery with a hydrometer. The battery must be stored with a full charge. A discharged battery will freeze.

Specific Gravity	Freezing Point
1.265	–71°F
1.250	–62°F
1.200	–16°F
1.150	5°F
1.100	16°F

NOTE

All batteries discharge during storage.

4. Recharge battery whenever the specific gravity is less than 1.225, before returning to service or every two months, whichever comes first.

COMMON CAUSES FOR BATTERY FAILURE

1. Overcharging
2. Undercharging
3. Lack of water
4. Loose hold downs and/or corroded connections
5. Excessive loads
6. Battery electrolyte substitutes
7. Freezing of electrolyte

NOTE

These failures do not constitute warranty.

BATTERY REMOVAL OR INSTALLATION

WARNING

When removing the battery, follow this order of disassembly to prevent your wrench from shorting against the frame.

1. Remove the Negative cable.
2. Remove the Positive cable.

To install a battery:

1. Attach the Positive cable.
2. Attach the Negative cable.

JUMP STARTING

WARNING

Failure to use this starting procedure could cause sparking, and the gases in either battery could explode.

1. Attach the first jumper cable from the positive terminal of the good battery to the positive terminal of the dead battery.
2. Attach the second jumper cable from the negative terminal of the good battery to the FRAME OF THE UNIT WITH THE DEAD BATTERY.

TIRES

Keep the pneumatic tires properly inflated. Overinflation will cause operator discomfort. Underinflation will cause short tire life.

Inflate the front and rear tires for normal or heavy load operations as shown in the following table:

Tire Size	Pounds per Square Inch
Front Tires	
16 x 6.50-8	12
Rear Tires	
23 x 10.50-12	10

Always see that the tire valve caps are in place and tightened securely to prevent loss of air and protect the valve core and stem.

Do not overload the tractor tires by mounting equipment on the tractor which exceeds the load capacity of the size of the tires on the tractor.

MOUNTING TIRES ON THE RIM

After mounting a new or old tire on the rim, inflate it to 20 pounds pressure to seat the tire bead on the rim flange. Then deflate the tire to the correct operating pressure.

NOTE

After the first 10 hours of operation, check and retorque the wheel lug nuts (both sides) to 35 ft-lbs. to make sure they have seated properly.

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, the following procedures are recommended:

WARNING

Never store engine with fuel in tank indoors or in poorly ventilated enclosures, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer, etc.

1. Remove all gasoline from fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine.

   Run engine until engine starts to falter, then use choke to continue engine operation until all fuel in tank and carburetor is exhausted. Remove fuel line at tank or carburetor and drain any remaining gasoline from system.

WARNING

Drain fuel into approved container outdoors, away from open flame.

Fuel left in engine during warm weather deteriorates and will cause serious starting problems.

2. Remove spark plug and pour one (1) ounce of engine oil through spark plug hole into cylinder. Crank engine several times to distribute oil. Replace spark plug.
3. Clean the engine and the entire tractor thoroughly.
4. Lubricate all lubrication points and wipe the entire machine with an oiled rag in order to protect the surfaces.
5. Follow battery storage instructions on page 21.
6. Protect tires and seat from sunlight. Inflate tires at regular intervals.

OPTIONAL EQUIPMENT AND ACCESSORIES

When you purchased your tractor, you probably had it completely equipped for your particular needs at the time. However, later you may wish to obtain optional equipment or accessories. These items and other allied equipment can be purchased from, and installed by, your authorized dealer.

The tractor is used for so many different types of work, and because it is called on to operate under so many different conditions, a variety of equipment is available to adapt it to the requirements of the user. Refer to equipment catalog.

MOWING

MOWING

WARNING

To avoid possible injury, do not allow anyone in the area opposite the discharge chute while mowing. Although the area has been supposedly cleared of foreign objects, small objects may be discharged by the mower.

WARNING

Never direct discharge of material toward bystanders or allow anyone near the machine while in operation.

For best results it is recommended that the first two laps should be cut with the discharge thrown towards the center. After the first two laps, reverse the direction to throw the discharge to the outside for the balance of cutting. This will give a better appearance to the lawn.

Do not cut the grass too short, as the mower will tend to scalp the grass. Short grass invites weed growth and yellows quickly in dry weather.

Mowing should be done with the engine at full throttle. Do not mow at high ground speed.

During certain times of the year and under some conditions, the mower may leave streaks of uncut material.

Streaking may occur when attempting to mow heavy weeds and tall grass. Under these conditions it may be necessary to go back over the cut area a second time to get a clean cut.

The following practices will help eliminate streaking:

1. Mow the area more often so the grass doesn't get too tall and heavy.
2. Operate the tractor at full throttle and lower forward speeds.
3. Keep the blades sharp and replace blades when worn.
4. Follow the mowing procedure shown in Figure 30.

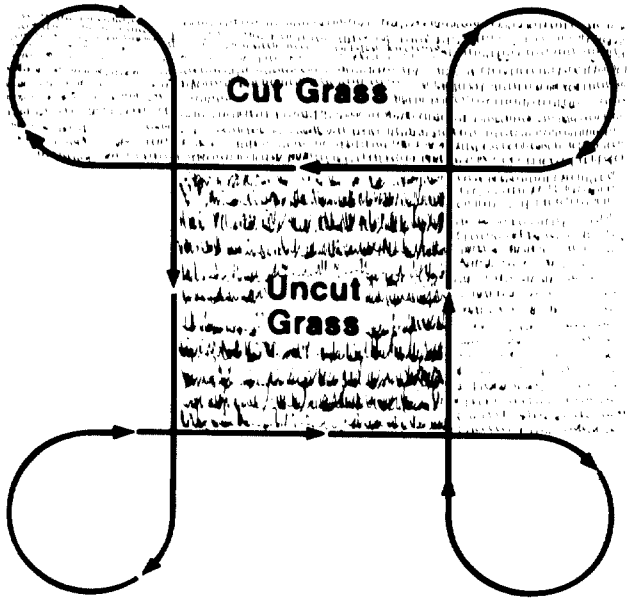


Figure 30

MAINTENANCE CHART

Operation to be performed	Before each use	10 hours or once a month	25 hours three times a season	50 hours or twice a season	100 hours or yearly	Before storage
Clean grille (front & backside) & engine inlet air screen		More often under dirty conditions X				
Check engine oil level	X					
Fill fuel tank	X					
Cylinder head cleaning				Leaded fuel – 250 hrs. Unleaded fuel – 500 hrs.		
Change engine oil	After first 5 hours		More often under dirty conditions X			
Replace trans-mission oil filter		After first 10 hours X		After first 50 hours X	Every 100 hrs. there-after	
Check battery electrolyte level		X				
Grease front axle pivot bolts		X		X		
Lubricate steering knuckles (2) and steering arm		X				
Retorque rear wheel lug nuts		After first 10 hours X				
Lubricate brake shaft			X			
Check transmission oil level			X			
Clean cooling fins & external surfaces			X			
Service air cleaner					More often under dirty conditions	
Check spark plugs					X	X
Lubricate speed control linkage cam plates					X	
Check and regrease front wheel bearings					X	X
Drain fuel						X
Pivot bar adjust-ment bolt					X	

NOTE

Maintenance information for optional equipment may be found in the manual which is included with the specific piece of optional equipment.

TROUBLE SHOOTING

Possible Cause	Possible Remedy
HARD TO START	
No gasoline in fuel tank or carburetor	Fill the tank with gasoline; open the fuel shut-off valve. Check the fuel line and carburetor.
Fuel line or carburetor clogged	Clean the fuel line and carburetor with commercial carburetor cleaner.
Gas filter plugged	Replace.
Water in gasoline	Drain the fuel tank and carburetor. Use new fuel and dry the spark plug.
Choked improperly. Flooded engine	Follow the starting instructions.
Defective ignition or loose wiring	Check the wiring, spark plug, or fuse.
Defective battery	Check and service. Refer to **"BATTERY."**
Spark plug dirty or improper gap	Clean, adjust the gap to .025-inch or replace the plug.
ENGINE OPERATES IRREGULARLY OR KNOCKS	
Engine incorrectly timed	*
Spark plug dirty; wrong gap or wrong type	Clean, reset the gap, or replace.
Poor or weak spark	Check the spark plug and wiring.*
Carburetor setting incorrect	Adjust. Refer to **"ADJUSTMENTS."***
Poor grade fuel or water in fuel	Drain and use a good grade of clean fuel.
Engine overheating	Refer to **"MAINTENANCE."**
Engine valves at fault	*
Engine smokes	Adjust the carburetor.*
Oil level will rise due to gasoline in crankcase	Refer to "OPERATING IN COLD WEATHER."
Air filter will become oil and fuel soaked	Refer to "OPERATING IN COLD WEATHER."
Engine leaks oil	Refer to "OPERATING IN COLD WEATHER."
Misfiring	Refer to "OPERATING IN COLD WEATHER."
Other engine problems	*
Excessive oil in air cleaner	Be sure that oil dipstick is fully seated
LACK OF POWER	
Air cleaner clogged	Service the air cleaner element. Refer to **"MAINTENANCE."**
Engine overload	Reduce the load.
Engine overheated	Make sure air intake screen, shrouding, engine fins, and grille are free of accumulated dirt and trash. Refer to **"MAINTENANCE."**
Poor fuel, too rich, or too lean a mixture	Refer to **"ADJUSTMENTS."**
Fuel tank air vent clogged	Open the vent in the cap.
Air leakage between carburetor and engine	Remove air cleaner. Tighten the carburetor and manifold mounting nuts. Replace as indicated in **"MAINTENANCE."**

*See your authorized dealer.

TROUBLE SHOOTING

Possible Cause	Possible Remedy
LACK OF POWER (Cont)	
Incorrect timing or faulty ignition	*
Brake drags	Adjust the brake. Refer to **"ADJUSTMENTS."**
ENGINE OVERHEATING	
Insufficient cool air, dirty air intake screen, shroud, cooling fins, or dirty grille	Keep the air intake area and cooling fins clean; refer to **"MAINTENANCE."**
Lean carburetor adjustment	Readjust. Refer to **"ADJUSTMENTS."**
Oil level incorrect	Engine oil level must not be over the "FULL" mark or below the "LOW" mark. Refer to **"MAINTENANCE."**

*See your authorized dealer.

LUBRICATION TABLE

Point of Lubrication	Check at Hours	Change at Hours	Capacity	Anticipated Air Temperature		
				Above +32°F	+32° to 0°F	Below 0°F
Engine crankcase	Check before each use	25	4 pints	*Cub Cadet* Low Ash Engine Oil S.A.E. 30	*Cub Cadet* Low Ash Oil S.A.E. 10W-40 or 10W-30	*Cub Cadet* Low Ash Engine Oil S.A.E. 5W-20 or 5W-30
Hydro-drive unit mounted on transmission case with filter	25	Add as needed	Approx. 14 pints	*Cub Cadet* Hydraulic Transmission Fluid Note: *Cub Cadet* hydraulic transmission fluid meets IH B-6 specifications. If fluid is used that does not meet these requirements *Cub Cadet* will not be responsible for substandard performance. Failures due to use of improper fluid are not covered by warranty. For maximum protection, use *Cub Cadet* Hydraulic Transmission Fluid.		
Steering knuckles & front axle pivot bolt	10			Use 251H EP grease or equivalent No. 2 multi-purpose lithium grease and apply two or three strokes or sufficient grease to flush out old grease and dirt.		
Front wheel bearings	100	or yearly		Remove front wheels and pack bearings with 251H EP grease or equivalent No. 2 multi-purpose lithium grease and reinstall wheels.		
Steering gear housing	100	or yearly	1/4 lb	Two strokes of the lubricator using 251H EP grease or equivalent No. 2 multi-purpose lithium grease.		

LUBRICATION GUIDE

The life of any machine depends upon the care it is given. Proper lubrication is a very important part of that care.

Be certain that all lubrication fittings are assembled in place, using the lubrication illustrations as a guide.

Always lubricate the tractor thoroughly before taking it to the field. Use a pressure lubricating gun.

Be sure all fittings are free from dirt and paint so the lubricant is certain to enter the bearing.

Always force the lubricant through the full length of each bearing until it emerges at the end, carrying with it the worn lubricant and any dirt that may have entered the bearing.

Miscellaneous working parts not provided with lubrication fittings should be oiled daily with a good grade of lubricating oil.

Lubricant is cheap. Use plenty of it. Worn parts can be expensive to replace.

Keep your supply of lubricating oil and grease stored in clean containers, and covered to protect from dust and dirt.

Keep the lubricating gun nozzle clean and wipe dirt from grease fittings before lubricating.

The symbols in the illustration indicate the method of application and the hourly intervals to apply the lubricant.

Use a pressure lubricating gun and apply 251H EP grease (or equivalent No. 2 multi-purpose lithium grease) sufficient to flush out the old grease and dirt. Lubricate at hourly intervals indicated on symbols.

Dipstick, use to check engine oil before each use.

LUBRICATION GUIDE

—BEFORE EACH USE

1. Engine filler cap and dipstick — Check the oil (with the engine stopped) and add sufficient new oil to bring it to the **"FULL"** mark on the dipstick. Do not overfill. Do not operate the engine if the oil level is below the **"LOW"** mark on the dipstick.

—AFTER EVERY 10 HOURS OF OPERATION

2. Steering knuckles (2) (Both sides) — Use 251H EP grease or equivalent No. 2 multi-purpose lithium grease and apply sufficient grease to flush out old grease and dirt.

3. Transmission oil filter — **NOTE:** After the first 10 hours only, remove the transmission oil filter and replace with a new filter. Refer to **"MAINTENANCE."** Change the transmission oil filter after 50 hours and every 100 hours of operation thereafter.

4. Front axle pivot bolt (Right side) — Use 251H EP grease or equivalent No. 2 multi-purpose lithium grease and apply sufficient grease to flush out old grease and dirt. **NOTE:** It may be necessary to rotate the front axle to reach the grease fitting.

—AFTER EVERY 25 HOURS OF OPERATION

5. Transmission oil level and fill tube — Check the oil with the engine stopped. Keep the lubricant up to **"FULL"** mark on dipstick (6).
NOTE: Transmission oil level and fill tube, also services the following:
   1. Hydrostatic transmission
   2. Rear axle
   3. Hydraulic lift system

6. Engine oil drain plug — While the engine oil is warm, remove the drain plug and drain all of the oil from the crankcase. Replace the drain plug. Refer to **"MAINTENANCE" "FILLING THE CRANKCASE"** for proper oil filling procedure. Refer to **"LUBRICATION TABLE"** for the proper quantity and viscosity to use.

—AFTER EVERY 50 HOURS OF OPERATION

7. Transmission oil filter — **NOTE:** After the first 50 hours only, remove the transmission oil filter and replace with a new filter. Refer to **"MAINTENANCE."** Change the transmission oil filter every 100 hours of operation thereafter.

—EVERY 100 HOURS OF OPERATION

8. Transmission oil filter — Change the transmission oil filter and replace with a new filter. Refer to **"MAINTENANCE."**

Speed Control Linkage

9. Cam plates — Once a year, apply a small amount of 251H EP grease or equivalent No. 2 multi-purpose lithium grease in the slots.

10. Steering gear housing — Every 100 hours or yearly use 251H EP grease or equivalent No. 2 multi-purpose lithium grease. Apply two strokes with lubricator.

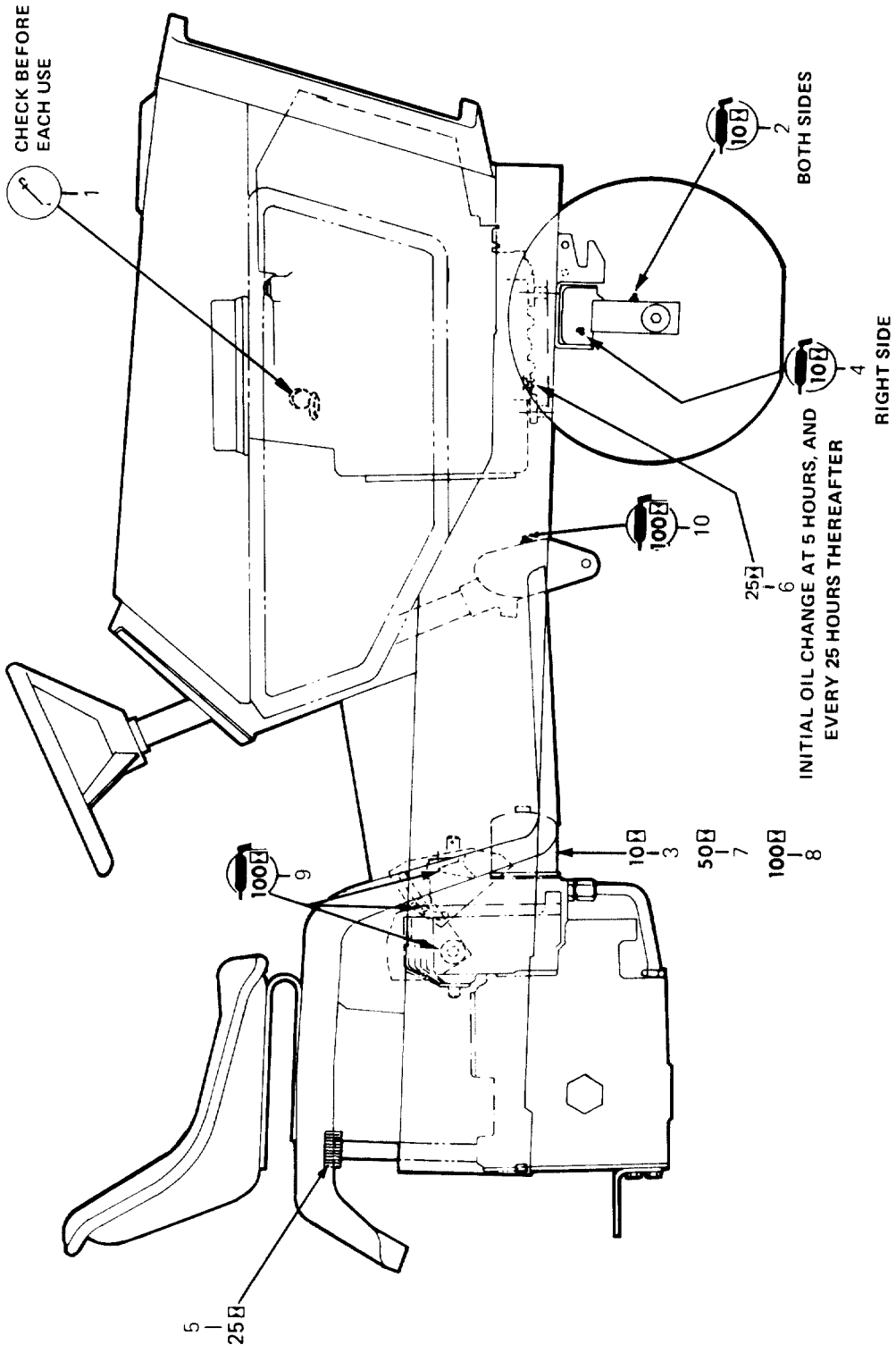
Miscellaneous

Brake pedal shaft — Lubricate the brake pedal shaft and linkage with eight or ten drops of engine oil.

NOTE

Lubrication information for optional equipment may be found in the manual which is included with the specific piece of optional equipment.

LUBRICATION GUIDE



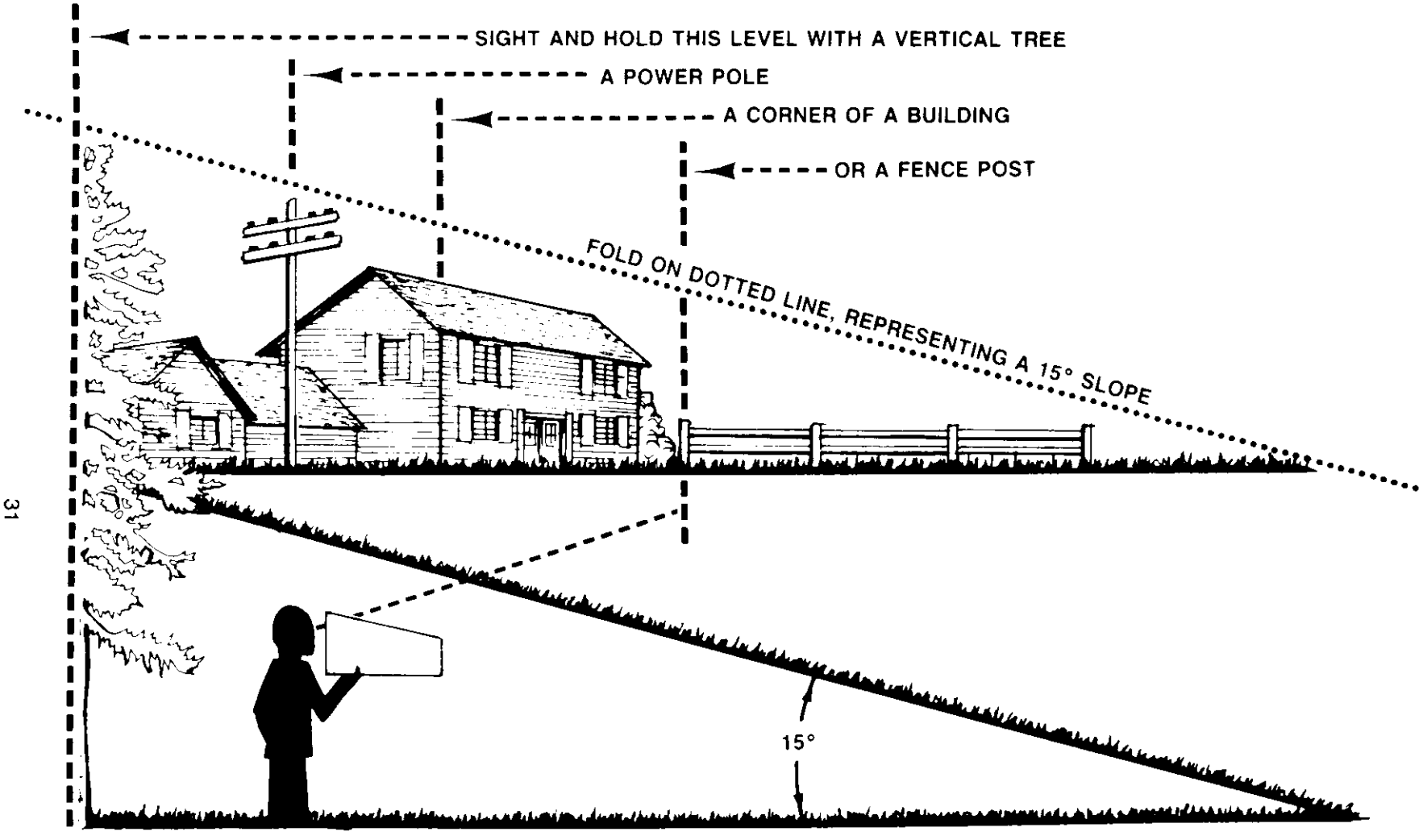
SPECIFICATIONS

	1210 and 1211
CAPACITIES	
Fuel Tank	4 gals.
Crankcase	4 pints
Transmission case with Hydrodrive unit mounted	7 qts.
Steering gear housing	1/4 lbs.
HYDROSTATIC DRIVE	
Speed: Forward	0 to 7.5 mph
Reverse	0 to 4 mph
ENGINE	
Make and model	Kohler
(electric starting)	12 HP
Cylinders	1
Bore	3.38 in.
Stroke	3.25 in.
Displacement (cubic inches)	29.07
Engine speed (governed) Low speed	1800 RPM
High idle speed (no load)	3600 RPM
(full load)	3400 RPM
Valve clearance (engine cold)	.008-.010 in. (intake) .017-.020 in. (exh.)
Ignition	Battery
Spark plug gap (Cub Cadet No. 759-3333)	.025 in. gap
ELECTRICAL SYSTEM	
System voltage	12 volt neg. ground
Battery	1 HPRLU
Alternator	15 amp
Fuse (cartridge type)	20 amp slow blow
Headlights (all glass, sealed beam units)	Lamp No. H7610
Taillight	Lamp No. 194
BRAKES	Dual disc, external
TIRE SIZES	
Front	16 x 6.50-8
Rear	23 x 10.50-12
DIMENSIONS	
Tread:	
Front with 16 x 6.50-8 tires	29.00 in.
Rear with 23 x 10.50-12 tires	27.00 in.
Wheelbase	44.00 in.
Length, over-all	72.00 in.
Width, over-all	37.75 in.
Height, over-all (to top of steering wheel)	43.00 in.
Ground clearance	6.00 in.
Turning radius	36 in.

Specifications are subject to change without notice.

Cut Along this Line

USE THIS SHEET AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.


SIGHT AND HOLD THIS LEVEL WITH A VERTICAL TREE
A POWER POLE
A CORNER OF A BUILDING
OR A FENCE POST
FOLD ON DOTTED LINE, REPRESENTING A 15° SLOPE
15°

SLOPE GAUGE

(Keep this sheet in a safe place for future reference.)

WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2½ feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.
Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.